

THE RELATIONSHIP BETWEEN EMOTIONAL INTELLIGENCE AND CLINICAL TEACHING EFFECTIVENESS IN NURSING FACULTY

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Nursing faculty play an important role in facilitating nursing student learning and shaping student experience in the clinical setting. Emotional intelligence (EI) in clinical nursing faculty may be one avenue to develop teaching effectiveness. This study investigated the relationship between EI and clinical teaching effectiveness of nursing faculty in an undergraduate nursing program. Using a cross-sectional correlation design, data were collected from a convenience sample of nursing faculty ($N = 47$) using the Bar-On Emotional Quotient Inventory: Short (EQ-i:S), the Nursing Clinical Teacher Effectiveness Inventory (NCTEI) and a demographic data page. The results indicated a statistically significant positive relationship between the EQ-i:S and the NCTEI total scores ($r_s = .599, P < .01$) and between many subscales of these tools. These findings contribute new knowledge to nursing education, including the following: (a) **a significant relationship between EI and clinical teaching effectiveness exists**, (b) faculty exhibit effective overall EI functioning with room to enhance competencies, and (c) faculty members see themselves as effective in their clinical teaching. Implications for clinical teaching practice include the need for faculty development and strengthening the faculty–student relationship. Possibilities for future research are discussed. (Index words: Emotional intelligence; Clinical teaching effectiveness; Nursing faculty; Nursing students; Nursing leadership) *J Prof Nurs* 28:231–240, 2012. © 2012 Elsevier Inc. All rights reserved.

THE EVOLUTION OF nursing practice has influenced the demand for independent nurses who can function in roles that require advanced skills in communication, leadership, and self-knowledge (Löfmark & Thorell-Ekstrand, 2004). Yet, employers often claim that graduating nursing students lack the competencies needed to successfully adapt as graduate nurses (Bellack, 1999). Emotional intelligence (EI), which includes skills identified by Löfmark and Thorell-Ekstrand, as above, is purported to be an important aspect of nursing education that may help to develop such leaders (Benson, Ploeg, & Brown, 2010; Brewer & Cadman, 2000; Bulmer Smith, Profetto-McGrath, & Cummings, 2009; Feather, 2009;

Freshwater & Stickley, 2004; Herbert & Edgar, 2004; Rochester, Kilstoff, & Scott, 2005). EI has been defined as “an array of non-cognitive capabilities, competencies and skills that influence one's ability to succeed in coping with environmental demands and pressures” (Bar-On 2002b, p. 1). Described by Bar-On (2002a) as a collection of emotional and social competencies, EI helps to determine a person's ability to adapt within an environment of interactions with one's self and with others. EI is associated with workplace effectiveness and success, particularly in business and organizational leadership (Downey, Papageorgiou, & Stough, 2006; Gardner & Stough, 2002; Kerr, Garvin, Heaton, & Boyle, 2006; Rosete & Ciarrochi, 2005; Stone, Parker, & Wood, 2005).

Such leadership is required by nursing faculty to facilitate nursing student learning in the clinical setting. **Faculty's flexibility, quality of discourse, and genuine concern for the student, all qualities evident in emotionally intelligent leaders, were identified by students as important for positive learning outcomes** (Makarem,

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Dumit, Adra, & Kassak, 2001). Juggling the responsibilities of nursing student education while ensuring patient safety requires well-developed teaching skills (Allison-Jones & Hirt, 2004). EI could have implications for clinical nursing education because its acquisition could facilitate the distinct skills that constitute effectiveness of clinical teaching. Although clinical nursing faculty play a critical role in facilitating student learning during clinical learning, little is known about faculty's EI or the relationship between EI and clinical teaching effectiveness. This article reports on a study that investigated the relationship between EI and clinical teaching effectiveness of nursing faculty in an undergraduate nursing program.

Literature Review

Emotional Intelligence

The idea of emotions as a form of intelligence, distinct from traditional cognitive intelligence, dates back to Thorndike (1920). He believed that standard intelligence tests such as the Intelligence Quotient (IQ) test measured only abstract intelligence and that social intelligence was a separate entity. Gardner (1983) agreed that intelligence existed beyond a single form and proposed a theory of multiple intelligences, including interpersonal and intrapersonal intelligence. Armstrong (1993) added that context, task, and demands of life also determined intelligence. For example, a nurse clinician might be brilliant in providing education to the family of a critically ill patient yet treat an inexperienced student nurse with little compassion. This highlights one context where IQ plays a minimal role and EI a larger one. Although IQ is important, it has been argued that EI plays a larger role in career success and the ability to form successful relationships (Stone et al., 2005).

There are two groups of EI conceptual models: ability models and mixed models. In ability models, the expression, regulation, and deployment of emotions arise from social and cognitive functions (Mayer & Salovey, 1997). Mixed models suggest that EI is a mixture of emotion-related competencies, personality traits, and character (Bar-On, 1997, 2000, 2002a, 2005; Goleman, 1995).

For this study, we chose to use the mixed model of EI, as this model aligned more closely to the characteristics valued in the nursing profession. Of the mixed models, the Bar-On Model of Emotional-Social Intelligence provided the most evidence of a comprehensive application of EI that appeared to be robust and valid. Bar-On's model is composed of five major components, further subdivided into 15 subcomponents that determine emotional, social, and psychological success. The five components include intrapersonal, interpersonal, stress management, adaptability, and general mood.

Of late, EI has received increased attention in business, education, and more recently, nursing. Business and organizational research have found that the higher the level of EI, the greater the person's emotional and social function, organizational effectiveness, and capacity to

self-actualize and be successful (Downey et al., 2006; Gardner & Stough, 2002; Kerr et al., 2006; Rosete & Ciarrochi, 2005; Stone et al., 2005).

Educational disciplines have studied the importance of EI in students and argue for blending emotional and social skills into curricula to enhance the development of future leaders (Benson et al., 2010; Carrothers, Gregory, & Gallagher, 2000; Elam, Stratton, & Andrykowski, 2001; Esmond-Kiger, Tucker, & Yost, 2006; Rochester et al., 2005). Entrance-level medical students' emotions and empathic abilities were moderately correlated with their abilities to recognize, discriminate, and regulate their moods (Elam et al., 2001). These authors suggested that monitoring and improving EI in medical students could assist the development of more effective physicians. Benson et al. (2010) found that nursing students had an adequate and effective EI function and suggested that further research is required to understand the role of EI in nursing education. Rochester et al. found that successful nursing graduates contributed EI competencies to difficult or stressful situations. It has been suggested that faculty must play a role in the development of these EI competencies in students (Benson et al., 2010; Rochester et al., 2005).

With mounting evidence regarding the value of EI, nursing has also begun to study its significance (Budnik, 2003; Farmer, 2004; Molter, 2001; Quoidbach & Hansenne, 2009; Young-Ritchie, Spence Laschinger, & Wong, 2009). Nurses must work effectively with human emotions, and they must demonstrate caring behaviors, both identified as integral components of EI. In a study of burnout and EI, Budnik found significant relationships between emotional exhaustion, depersonalization of career intent, and burnout as predictors of EI and suggested that emotionally competent nurses who were aware of self-care could actively work to reduce or eliminate burnout. Farmer investigated the relationship of EI to burnout and job satisfaction in early nursing practice and found that participants with a higher level of EI had lower levels of depersonalization and higher levels of personal accomplishment. In a study of the impact of trait EI on nursing team performance, health care quality was positively correlated with emotion regulation, which was positively correlated with group cohesiveness (Quoidbach & Hansenne, 2009).

Regarding nursing leadership and EI, Molter (2001) compared nurse leaders' perceptions of the role of emotions in their leadership with the Ability Model of EI as proposed by Mayer, Salovey, and Caruso (2000). Molter found that all of the model's EI abilities were reflected in the participants' stories. In addition, of the 26 nursing leader participants, all but one demonstrated moderate to enhanced EI. In a study that tested a model to explore the relationships among emotionally intelligent leadership, workplace empowerment, and organizational commitment, Young-Ritchie et al. (2009) reported that perceived emotionally intelligent leadership behaviors had a strong effect on emergency nurses' feelings of empowerment, which had a strong effect on organizational commitment.

Nursing educators likewise must be committed to demonstrating leadership qualities for the benefit of nursing students, clients, and the clinical staff with whom their students work and from whom students learn. Emerging evidence suggests that EI competence is important for nursing students to become competent practitioners and leaders (Benson et al., 2010; Rochester et al., 2005; Wilson & Carryer, 2008). The clinical setting can provide an important forum for nursing faculty to facilitate the development of EI among students. However, to enhance the development of EI, clinical faculty would need well-developed EI competencies themselves, but little research has been done in this area.

Clinical Teaching Effectiveness

Although little theoretical literature pertaining to clinical teaching effectiveness exists, Knox and Mogan have conducted the most comprehensive work in this area (Knox & Mogan 1985; Mogan & Knox, 1983, 1987). Knox and Mogan defined effective clinical teaching as “actions, activities, and verbalizations of the clinical instructor, which facilitate learning in the clinical area,” a definition that was cited from O’Shea and Parsons (1979, p. 26). Knox and Mogan identified five categories of teaching effectiveness: teaching ability, nursing competence, evaluation, interpersonal relationship, and personality trait.

Effective clinical teaching is associated with enhanced student learning (Knox & Mogan, 1985). The Nursing Clinical Teacher Effectiveness Inventory (NCTEI) was designed by Knox and Mogan to determine the degree to which respondents felt that clinical nursing faculty demonstrated effective teaching characteristics. Mogan and Knox (1987) investigated best and worst teachers by considering both teacher and student perceptions. They found that both groups agreed that “being a good role model” was the most important characteristic differentiating the good from the less desirable clinical teacher and that “enjoys nursing,” “enjoys teaching,” and “is approachable” were also highly rated. This study was replicated a number of times (Kotzabassaki et al., 1997; Lee, Cholowski, & Williams, 2002; Nehring, 1990).

Although we found no theoretical literature linking EI and clinical teaching effectiveness, literature linking EI to effective leadership in career success was identified (Downey et al., 2006; Gardner & Stough, 2002; Stone et al., 2005; Young-Ritchie et al., 2009). Downey et al. found that high levels of EI and intuition were more likely in female organizational managers that used a transformational leadership style, whereas Gardner and Stough noted a negative relationship between *laissez faire* leadership and EI. In a study of school principals and vice principals, the total EI score was a significant predictor of successful leadership, with the most effective leaders having a combination of task- and relationship-oriented skills (Stone et al., 2005). Nursing has also begun to recognize the role of EI in effective leadership. Vitello-Ciccui (2001) found that nursing leaders with high EI used more transformational leadership skills. More

recently, emergency room nurses reported that their supervisors’ leadership behaviors that are consistent with EI strongly influenced their feelings of empowerment (Young-Ritchie et al., 2009).

The qualities of effective leadership reported in the literature are similar to the effectiveness traits desired for clinical nursing faculty. For several decades, researchers have explored clinical teaching effectiveness of nursing faculty with recommendations for staff development, self-evaluation, increased flexibility, and modifications of behaviors to attain effective clinical teaching, but there is limited research of how faculty would implement these behavioral changes. Allison-Jones and Hirt (2004) suggested that patient safety and the preparation of students for the role of professional nurse require special and distinct teaching skills that are not innate but developed over time and with experience. Nursing faculty must take responsibility to identify and apply strategies for development of these clinical teaching skills, but there is little research about how to assist them.

EI may provide one vehicle to promote the development of effective clinical teaching skills among nursing faculty because emotional and social competencies can be learned and improved with appropriate interventions (Bar-On, 2002a; Mayer, 1999). In turn, the development of these competencies in faculty may enhance the development of EI skills in nursing students, thereby enhancing their ability to function effectively as graduate nurses and as nurse leaders. Examination of this relationship could guide faculty development and inform nursing education. However, the relationship between EI and clinical teaching effectiveness is unclear.

Purpose

The purpose of this exploratory study was to describe the relationship between EI and clinical teaching effectiveness of nursing faculty in a bachelor of science in nursing (BSN) program. Specifically, this study explored (a) the EI scores, (b) the clinical teaching effectiveness scores, (c) the relationship between EI and clinical teaching effectiveness scores, and (d) the relationship between EI scores and the demographic variables of age, years of clinical nursing, years of clinical teaching, level of education, and employment status of clinical nursing faculty.

Method

Design and Sample

A cross-sectional survey design was used, and although it cannot establish causation between two variables, it is a relatively feasible way to determine association in a preliminary exploration such as this (Streiner & Norman, 1998). A convenience sample was drawn from nursing faculty in an undergraduate nursing program that used a small group, problem-based, self-directed learning approach. The target population included all full- and part-time clinical nursing faculty who taught in a second- or third-year clinical course and accompanied their students into the clinical setting. The sample size was calculated to detect a correlation (effect size) of .40

between the Emotional Quotient Inventory: Short (EQ-i:S) and Nursing Clinical Teaching Effectiveness Instrument (NCTEI) scores with a significance level of $\alpha = .05$ and power of 0.80. A minimum sample size of 46 participants was required. Of the 91 invited clinical nursing faculty members, 47 (52%) completed and returned the questionnaires.

Measures

Emotional Intelligence. EI was assessed in clinical nursing faculty using the self-report BarOn EQ-i:S (Bar-On, 2002a). This instrument is composed of 51 items in the form of short sentences. Respondents rated each statement from 1 (*very seldom or not true of me*) to 5 (*very often or true of me*). Items were tallied for a total EQ score and seven subscale scores: (a) intrapersonal (i.e., self-awareness and self-expression abilities); (b) interpersonal (i.e., social awareness, awareness of others' feelings or cooperative relationship building); (c) stress management (i.e., capacity to manage and regulate emotions); (d) adaptability (i.e., situational coping, flexibility and problem solving requisite for managing change); (e) general mood (i.e., emotional competence needed to achieve one's goals); (f) inconsistency index; and (g) Positive Impression (PI) Scale, both validity indicator scales.

Raw scores were transformed to standard scores to allow for comparison. BarOn EQ-i:S uses normative comparisons by gender and age based on a population of 2,000 adults with a normative mean standard score of 100 and a standard deviation of 15 (Bar-On, 2002a). Standard scores within one standard deviation of the normative sample mean fall within effective functioning and suggest some areas of strength and some areas that can be developed. Enhanced skills are generally indicated by scores of greater than 115 (one standard deviation or more above the mean) and indicate that the skills for that particular scale are well developed. Conversely, areas for enrichment are indicated by scores of less than 85 (one standard deviation or more below the mean) and indicate that the skills identified for that scale are significantly lacking (Bar-On, 2002a). The BarOn EQ-i:S was developed through modification of the longer Emotional Quotient Inventory (EQ-I), an instrument found to be reliable and valid (Bar-On, 2002a). Internal consistency coefficients of the BarOn EQ-i:S ranged from .76 to .93, except for the PI Scale, which ranged from .51 to .76 (Bar-On, 2002a). Test-retest reliability was examined over a 6-month period in a sample of 352 adults and ranged from .46 to .80 (Bar-On, 2002a). Construct validity was based on the correlation between BarOn EQ-i:S and BarOn EQ-I. Factor analysis of the BarOn EQ-i:S scales indicated that all correlations were statistically significant ($P < .05$; Bar-On, 2002a). Overlapping scale components were highly correlated, ranging from $\alpha = .73$ to .96 for males and from $\alpha = .75$ to .97 for females (Bar-On, 1997). Two of the EQ-i:S scales function as validity indicators. The inconsistency index contains two pairs of items in each of the five main

scales and evaluates the inconsistency in responses to items with similar content, whereas the PI Scale detects inflated positive self-presentation (Bar-On, 2002a).

Modified NCTEI. A modified self-report NCTEI (Allison-Jones, 2002) was used in this study. The NCTEI, originally formulated by Knox and Mogan (1985), determines the degree to which clinical nursing faculty demonstrate effective teaching characteristics. Items on the NCTEI were developed from student descriptions of effective and ineffective teaching behaviors and from previous literature (Mogan & Knox, 1983). This instrument is composed of 48 items in the form of short phrases. Respondents rate each phrase from 1 (*never*) to 7 (*always*). The five subscales include (a) teaching ability (i.e., how well faculty members transmit skills and attitudes); (b) nursing competence (i.e., faculty's attitude toward nursing along with theoretical and clinical knowledge used in practice); (c) evaluation (i.e., type and amount of feedback given to students regarding clinical performance and written assignments); (d) interpersonal relationship (i.e., faculty's ability to engage in reciprocal connection with others excluding therapeutic communication with clients); and (e) personality trait (i.e., attitudes, emotional tendencies, and character traits).

The modified NCTEI (Allison-Jones, 2002), like the original, consists of a total score and five scales, further divided into 48 discrete characteristics. In this study, three questions lacked clarity for many participants, possibly because of the reversed wording that was used. In collaboration with a university statistician, a decision was made to remove these questions from the analysis. Removal had less impact on altering results than leaving them in (Pagano & Gauvreau, 2000). Content validity of the modified NCTEI was enhanced through a pilot study of 60 participants with modifications based on respondent feedback (Allison-Jones, 2002). Construct validity was demonstrated by a number of replication studies with NCTEI items such as "enjoyed teaching" and "was a good role model" demonstrated as significant and meaningful (Kotzabassaki et al., 1997; Lee et al., 2002; Nehring, 1990). Results of these studies provided evidence that the approach of the NCTEI measured the constructs in question.

Reliability measurements for the original NCTEI include internal consistency and stability measurement. Internal consistency of the NCTEI has been demonstrated as homogeneous in what it measures for each of the five subscales. Reliability coefficient alpha for each of the five subscales ranged from $\alpha = .79$ to .89 (Knox & Mogan, 1985). Additional psychometric testing confirmed internal consistency with reliability coefficient alpha ranging from $\alpha = .79$ to .92 (Mogan & Knox, 1987). Test-retest scores over a 4-week period ranged from $r = .76$ to $r = .93$. The modified version of the NCTEI was found to have internal consistency, using Cronbach's alpha ($r_{xx} = .9786$) (Allison-Jones, 2002). No test-retest data were available.

Data Collection

After ethics approval was obtained, research packages were distributed to potential participants at their employment setting, which included (a) an information letter containing instructions for participation, (b) two informed consent forms (one to keep and one to return), (c) a demographic data page, (d) a copy of the BarOn EQ-i:S, (e) a copy of the modified NCTEI, and (f) a return envelope addressed to the researcher. The information letter included assurance that participants were under no obligation to participate and that their decision would not impact their role as a nursing teacher. Once the packages were distributed, an e-mail was sent to the potential participants inviting them to take part and to inform them that a research package had been placed in their mailboxes. Two reminder e-mails were sent in the next 2 weeks. Ethical approval was obtained from the ethics boards at the three participant sites, all part of one collaborative BScN program.

Data Analysis

Statistical Package for the Social Sciences 15.0 was used in the analysis. Standard scores were calculated for BarOn EQ-i:S. For both BarOn EQ-i:S and the modified NCTEI, total and subscale scores were summarized using means and standard deviations. Spearman's correlation coefficient (Spearman's rho) was used to examine the relationship (a) between BarOn EQ-i:S and the modified NCTEI total scores, (b) between BarOn EQ-i:S scales and NCTEI scales, and (c) between BarOn EQ-i:S and the demographic variables of age, years of clinical nursing experience, years of clinical teaching experience, and employment status.

Results

Sample Description

All participants were female, and most were older than 40 years, had graduate degrees, and worked part-time (see Table 1). Although most of the participants had more than 11 years of nursing experience, there was a wider distribution of years of clinical teaching experience.

EQ-i:S Scores

Mean, standard deviation, and minimum and maximum scores of each EQ-i:S scale for faculty members are displayed in Table 2. All of the mean EQ-i:S scale scores, including the mean total EQ for faculty, were above the normative sample mean ($M = 100$). The frequency and percentage of the levels of functioning are displayed in Table 3.

Most faculty scores fell within the level of effective functioning (85–115) for all EQ-i:S scales. However, two (4.3%) faculty members scored in the area for enrichment on total EQ. None of the participant scores for the intrapersonal scale fell within the area for enrichment. The highest percentage (10.6%) of faculty who scored in area for enrichment, did so on the general mood subscale. The highest percentage (38.3%)

Table 1. Characteristics of Participants ($N = 47$)

Characteristic	<i>n</i>	%
Age		
≤29 years	4	8.5
30–39 years	7	14.9
40–49 years	20	42.6
≥50 years	16	34.0
Clinical nursing experience		
≤2 years	1	2.1
3–5 years	8	17.0
6–10 years	5	10.6
≥11 years	33	70.2
Clinical teaching experience		
≤2 years	12	25.5
3–5 years	13	27.7
6–10 years	11	23.4
≥11 years	11	23.4
Level of education		
Doctoral	5	10.6
Master's degree	30	63.9
Baccalaureate	11	23.4
Diploma	1	2.1
Employment status		
Full-time	19	40.4
Part-time	28	59.6

of faculty who scored in enhanced skills did so on the stress management subscale. The lowest percentage (10.6%) of faculty who scored in enhanced skills did so on the adaptability subscale.

NCTEI Scores

Mean, standard deviations, and minimum and maximum faculty scores were calculated for the total score and each of the five subscales of the NCTEI. These are reported in Table 4. The NCTEI mean total score for faculty was 273.93 ($SD = 15.91$) out of a possible 315. The lowest reported score was 242.25, and the highest reported score was 308.25. Teaching ability mean score for faculty was 88.52 ($SD = 6.21$). The highest score for nursing competence was a perfect score of 56. Evaluation mean score was 54.5 ($SD = 3.84$) out of a possible 64. Interpersonal relationship mean score was 38.39 ($SD = 2.69$), with the highest reported score a perfect score. The mean faculty score on personality trait was 42.51 out of a possible 49.

Table 2. Means, Standard Deviation, and Minimum and Maximum Scores for EQ-i:S Scales ($N = 47$)

	<i>M</i>	<i>SD</i>	Min/Max
Total EQ	107.47	12.54	76/129
Intrapersonal	108.38	11.09	85/128
Interpersonal	102.36	10.73	78/122
Stress management	107.62	13.87	71/126
Adaptability	102.55	11.82	70/122
General mood	104.32	13.90	71/125

Table 3. Frequency and Percentage of Faculty Levels of EQ Functioning ($N = 47$)

EQ-i:S scale	Area for enrichment <85	Effective functioning 85–115	Enhanced skills >115
	<i>n</i> (%)	<i>n</i> (%)	<i>n</i> (%)
Total EQ	2 (4.3)	33 (70.2)	12 (25.5)
Intrapersonal	0 (0)	34 (72.3)	13 (27.7)
Interpersonal *	3 (6.4)	39 (82.9)	5 (10.6)
Stress management	3 (6.4)	26 (55.3)	18 (38.3)
Adaptability	3 (6.4)	39 (83.0)	5 (10.6)
General mood *	5 (10.6)	30 (63.8)	12 (25.5)

* Indicates scale that does not total 100% because of round-off error.

Relationship Between EI and Clinical Teaching Effectiveness

We found a number of positive and statistically significant relationships between EI scores and clinical teaching effectiveness scores among nursing faculty (see Table 5). A moderately strong relationship was found between total EQ and total NCTEI (Spearman's $\rho = 0.599$; $P < .01$). Total EQ was also moderately correlated with all NCTEI scales ($P < .01$). Total NCTEI showed statistically significant positive correlations with all EQ-i:S scales, including intrapersonal ($P < .05$), interpersonal ($P < .01$), stress management ($P < .05$), adaptability ($P < .01$), and general mood ($P < .01$). The EQ-i:S subscales were found to be significantly correlated with many of the NCTEI subscales at levels of $P < .01$ and $P < .05$.

Relationship Between EI and Demographic Variables

The fourth area explored in this study was the relationship between EI and age, years of clinical nursing, years of clinical teaching, level of education, and employment status of nursing faculty. Analysis revealed no statistically significant relationships between EI and any of these variables.

Discussion

The overall level of EI for the majority of nursing faculty was in the effective functioning category, meaning that participants had an adequate capacity to manage their emotional and social functioning with some areas of strength and areas that required improvement (Bar-On, 2002b). Only 25% of faculty scored beyond this level in the “enhanced functioning” category. This finding highlights that only one quarter of faculty are considered exceptionally effective in social and emotional aspects of daily living (Bar-On, 2002b). Nursing faculty must be

strong leaders to provide a safe learning environment for students while assuring quality client care. In an education environment, total EQ was a significant predictor of perceived successful leadership (Stone et al., 2005), whereas Young-Ritchie et al. (2009) reported that nurses who perceived their leaders to have emotionally intelligent leadership qualities felt more empowered. Investment to achieve enhanced EI function and advanced leadership of nursing faculty could assist in creating optimal learning conditions for students.

Participant scores on the various subscales provided additional detail about faculty EI. Self-awareness, reflection, and achievement that characterize Bar-On's intrapersonal component are imbedded into the nursing program in which the participants taught. Further, nursing leaders who continue to develop as effective leaders reflect upon successes and difficult situations (Vitello-Ciccui, 2001). Leaders must also be able to express themselves in a manner that shows confidence (Bar-On, 2002a; Stone et al., 2005).

Interpersonal competency, more specifically relationship building, is a critical skill that assists faculty to teach and model for students how to become effective members of the health care team (Gillespie, 2002; Wiseman, 1994). Bar-On (2002b) proposed mood as an essential element in building relationships, and because 10.6% of faculty in the current study require enrichment in this area, this may also account for some faculty members' lower interpersonal function. In the context of the clinical setting, beyond the effective student/faculty relationship, nursing faculty must also have skill to invest in relationships with nurses and the interprofessional team involved with the students and clients.

Faculty members who require development of adaptability competencies may lack the ability to manage change (Bar-On, 2002b). Inflexibility could impede student learning and can result in missed learning opportunities (Krichbaum, 1994). Given the responsibility and role of clinical nursing faculty, it could be questioned whether an effective level of EI functioning is adequate or acceptable. Guidance by optimistic faculty with enhanced EI competencies could provide a more enriching and comfortable clinical experience for students, but research is needed to support this speculation.

Nursing faculty rated themselves very highly on their clinical teaching effectiveness. A number of studies that

Table 4. Mean, Standard Deviation, and Minimum and Maximum Scores for NCTEI

Instrument	<i>M</i>	<i>SD</i>	Min/Max
Total NCTEI	273.93	15.91	242.25/308.25
Teaching ability	88.52	6.21	70.75/104.25
Nursing competence	49.28	3.29	43.00/56.00
Evaluation	54.63	3.84	48.00/62.50
Interpersonal relationships	38.39	2.69	34.00/42.00
Personality trait	42.51	3.27	36.00/49.00

Table 5. Correlations Between EQ-i:S and NCTEI

	NCTEI total score	Teaching ability	Nursing competence	Evaluation	Interpersonal relationship	Personality trait
Total EQ	.599 [†]	.517 [†]	.415 [†]	.545 [†]	.503 [†]	.525 [†]
Intrapersonal	.361 [*]	.266	.354 [*]	.286	.235	.441 [†]
Interpersonal	.523 [†]	.427 [†]	.258	.489 [†]	.478 [†]	.491 [†]
Stress management	.345 [*]	.296 [*]	.192	.292 [*]	.338 [*]	.249
Adaptability	.495 [†]	.457 [†]	.329 [*]	.457 [†]	.445 [†]	.244
General mood	.464 [†]	.403 [†]	.392 [†]	.475 [†]	.378 [†]	.437 [†]

Note. All correlations are Spearman's rho.

* $P < .05$, two-tailed.

† $P < .01$, two-tailed.

used the NCTEI showed no significant differences in faculty and student perceptions of clinical faculty (Allison-Jones, 2002; Knox & Mogan, 1985; Lee et al., 2002; Sieh & Bell, 1994; Stoltenberg, 1997). Conversely, Wong (1978) found that nursing faculty are sometimes unaware of or overlook students' reactions with regard to their teaching, a finding worthy of consideration. In this study, consistent with previous research (Allison-Jones, 2002; Nehring, 1990; Sieh & Bell, 1994), faculty perceived themselves as least effective in teaching ability, perhaps suggesting that preparation of clinical faculty is inadequate and graduate level of education provides insufficient training for the important role of clinical teaching.

The statistically significant and moderately high correlation between EI and clinical teaching effectiveness indicates that a higher level of EI functioning was associated with a higher level of clinical teaching effectiveness, and a lower level of EI functioning was associated with lower clinical teaching effectiveness. This finding is key in light of the contention within the nursing literature that EI is an important quality to promote in nursing educators (Brewer & Cadman, 2000; Freshwater & Stickley, 2004; Herbert & Edgar, 2004). Rosete and Ciarrochi (2005) found that higher EI among business executives was associated with more leadership effectiveness, in particular, the likelihood of relating effectively with colleagues and staff. In a study of 50 nurse leaders, Vitello-Ciccui (2001) reported that nursing leaders required EI to provide enlightened leadership to understand the demands and stresses of the nursing staff. Akerjordat and Severinsson (2010) concluded that EI competencies in nurse leaders could facilitate a supportive environment as well as empowerment and well-being to those in that environment. If an emotionally intelligent clinical teacher is more likely to have effective clinical teaching skills and provide a more supportive environment, perhaps faculty members should strive to have well-developed EI competencies. A relationship was also found between EI and the individual subscales of the NCTEI (i.e., evaluation, personality trait, teaching ability, interpersonal relationship, and nursing competence). Specifically, higher EI scores were associated with more effective evaluation skills and included individual items such as clear communication of expectations and giving students constructive feedback.

Nursing faculty who reported higher EI reported more positive personality traits, such as having a positive outlook on life (Bar-On, 2002b). Faculty with these traits would be more likely to demonstrate enthusiasm and confidence in the clinical tutor role and be nonjudgmental with students. This is consistent with the literature, where nursing students have identified that faculty with positive personality traits such as a sense of humor and enthusiasm can promote their learning (Wolf, Bender, Beitz, Wieland, & Vito, 2004).

A lack of enthusiasm can be interpreted as a lack of caring and has been identified as a characteristic of emotional exhaustion in nurses (Budnik, 2003; Farmer,

2004). Budnick found that emotional exhaustion predicted a lower EI score. If level of EI functioning can circumvent emotional exhaustion and displays of non-caring behaviors, attention to faculty EI should be addressed to positively impact students' perceptions and faculty's clinical teaching effectiveness.

Nursing faculty who reported higher EI tended to report a higher degree of teaching ability. Such individuals exhibit a joy in teaching and can inspire students to learn (Knox & Mogan, 1985). Strong teaching ability could promote a connected student–teacher relationship where students feel supported (Gillespie, 2002). This association is worthy of consideration as a means to improve the student learning experience and the connectedness between faculty members and students.

Nursing faculty who reported higher EI tended to report being more competent teachers. Building mutual respect with students and facilitating the development of student/staff rapport in the clinical setting are interpersonal skills that assist faculty to promote a positive learning environment (Dunn & Hansford, 1997). Students identified interpersonal skills such as clinical faculty's quality of answering questions and specificity of feedback as significantly associated with their learning (Makarem et al., 2001).

Nursing faculty who reported high EI were more likely to report a higher level of nursing competence. Higher functioning individuals will likely show optimism along with strong clinical skills (Knox & Mogan, 1985). They will also demonstrate assistive behaviors such as helping students with skills and coaching students without taking over (O'Shea & Parsons, 1979).

Farmer (2004) found that a sense of personal accomplishment was related to EI in early nursing practice, which may also be applicable to a more experienced nurse, including clinical faculty. It seems plausible that faculty members who are content or personally satisfied in their roles as both nurse and educator likely exude these feelings outwardly and demonstrate nursing competence in an emotionally intelligent way.

It was surprising that no statistically significant relationships between EI and age, years of clinical nursing, years of clinical teaching, and level of education of nursing faculty were found. In Jenkins' (2006) study of EI in nursing faculty, learning environment, and empowerment of baccalaureate nursing students, Jenkins found that faculty demographic variables including courses taught, highest degree, certification, race, gender, and teaching responsibility of didactic or clinical courses did not contribute to the variance of the total EI score. This could indicate that faculty lacks EI training, but further research is needed to support this.

Study Implications

The study results suggest a number of implications for clinical teaching practice and nursing research. The finding that a small number of faculty members scored in

the EI category of area for enrichment and that few scored in the category of enhanced skills is somewhat disconcerting given the nature and responsibility of their roles in training new nurses. Because EI can be enhanced, (Nelis, Quoidbach, Mikolajczak, & Hansenne, 2009; Sala, 2007), we should consider faculty development strategies to improve EI. Such strategies may include participating in EI or social skills training programs (Bar-On, 2002a) using written materials (Bar-On, Maree, & Elisa, 2007; Orme, 2001) or Web-based programs (e.g. addEQ Program). Using a controlled experimental design, Nelis et al. found a significant increase in emotion identification and management following a short but empirically derived EI training with persistent change after 6 months. Strategies used in their study included lectures, role-play and two-person activities, group discussion, and homework readings. There is little literature on how to improve clinical teaching, but expert clinical teachers identify reflection, attending conferences, and reading current literature as strategies to appraise and improve teaching (Scanlan, 2001).

Future research could examine the effectiveness of such strategies to improve EI and clinical teaching effectiveness. Furthermore, research could explore how improved EI and clinical teaching effectiveness of nursing faculty can impact the learning experience of students. A connected student–teacher relationship supports coparticipation in the learning process with mutuality to enhance student ability to focus on learning and the synthesis of knowledge (Gillespie, 2002). If faculty practiced with enhanced EI competencies, including interpersonal skills, this could lead to more effective clinical teaching and enhanced role modeling for students in the clinical setting, thus improving the learning environment.

Study Limitations

The cross-sectional study design precludes determination of causation between EI and clinical teaching behaviors but does permit determination of association between these variables (Streiner & Norman, 1998). Because the sample was drawn from only one baccalaureate nursing program that used a self-directed, small group, problem-based learning approach, generalization to faculty of other nursing programs is limited. Gender differences could not be explored because only females participated. The questionnaires assessed self-perceptions of nursing faculty regarding their EI and clinical teaching effectiveness. Thus, the risk for response bias must be considered, although this study offered confidentiality and some degree of anonymity to encourage honesty. The EQ-i:S PI Scale indicated that 20% of faculty members might have given an inflated impression of themselves, impacting the reliability of results. NCTEI total and subscale scores were high and demonstrated limited variability

Conclusions

This study makes several important contributions to nursing education research. This study identified a

number of statistically significant positive correlations between EI and clinical teaching effectiveness, suggesting that faculty with a higher level of emotional competence will also demonstrate more effective clinical teaching. Faculty members have a generally effective or average level of EI functioning, and surprisingly, some faculty members require enhancement of EI functioning in some areas. Study findings give credence to the idea that EI competencies are desirable for enhancing clinical teaching effectiveness of nursing faculty. The findings also support the belief that to facilitate student learning in the clinical setting, nursing faculty members must be competent in understanding their own emotions and the impact of their behaviors on students. Placing EI at the heart of nursing curriculum, as suggested by Freshwater and Stickley (2004), would require these competencies in nursing faculty.

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References

- addEQ Program. Retrieved November 21, 2009, from <http://www.addeq.com/>.
- Akerjordet, K., & Severinsson, E. (2010). The state of the science of emotional intelligence related to nursing leadership: An integrative review. *Journal of Nursing Management*, 18, 363–382.
- Allison-Jones, L. (2002). Student and faculty perceptions of teaching effectiveness of full-time and part-time associate degree nursing faculty. *Dissertations Abstracts International*, 63, 2805A (UMI No. 3061240).
- Allison-Jones, L., & Hirt, J. (2004). Comparing the teaching effectiveness of part-time & full-time clinical nurse faculty. *Nursing Education Perspectives*, 25, 238–243.
- Armstrong, T. (1993). *Seven kinds of smart: Identifying and developing your many intelligences*. New York: Plume.
- Bar-On, R. (1997). *BarOn Emotional Quotient Inventory Technical Manual*. Toronto, ON: Multi-Health Systems.
- Bar-On, R. (2000). *Emotional and social intelligence: Insights from the Emotional Quotient Inventory (EQ-i)*. In R. Bar-On, J. Parker (Eds.), *Handbook of emotional intelligence*. (pp. 363–368). San Francisco, CA: Jossey-Bass.
- Bar-On, R. (2002a). *BarOn Emotional Quotient Inventory: Short (BarOn EQ-i:S)*. Toronto: Steven J. Stein.
- Bar-On, R. (2002b). *BarOn Emotional Quotient Inventory: Short (BarOn EQ-i:S) Development Edition*. Toronto, ON: Multi-Health Systems Inc.
- Bar-On, R. (2005). The BarOn model of emotional-social intelligence (ESI). *Psicothema Special Issue on emotional intelligence*, 17, 1–28.
- Bar-On, R., Maree, J., & Elisa, M. (2007). *Educating people to be emotionally intelligent*. Westport, CT: Praeger.
- Bellack, J. (1999). Emotional intelligence: A missing ingredient. *Journal of Nursing Education*, 38, 3–4.
- Benson, G., Ploeg, J., & Brown, B. (2010). A cross-sectional study of emotional intelligence in baccalaureate nursing students. *Nurse Education Today*, 30, 49–53.
- Brewer, J., & Cadman, C. (2000). Emotional intelligence: Enhancing student effectiveness and patient outcomes. *Nurse Educator*, 25, 264–266.
- Budnik, M. F. (2003). Emotional intelligence and burnout: Influence on the intent of staff nurses to leave nursing. *Dissertations Abstracts International*, 64, 4281B (UMI No. 3106490).
- Bulmer Smith, K., Profetto-McGrath, J., & Cummings, G. (2009). Emotional intelligence and nursing: An integrative literature review. *International Journal of Nursing Studies*, 46, 1624–1636.
- Carrothers, R., Gregory, S., & Gallagher, T. (2000). Measuring emotional intelligence of medical school applicants. *Academic Medicine*, 75, 456–463.
- Downey, L., Papageorgiou, V., & Stough, C. (2006). Examining the relationship between leadership, emotional intelligence and intuition in senior female managers. *Leadership & Organization Development Journal*, 27, 250–264.
- Dunn, S., & Hansford, B. (1997). Undergraduate nursing students' perceptions of their clinical learning environment. *Journal of Advanced Nursing*, 25, 1299–1306.
- Elam, C., Stratton, T., & Andrykowski, M. (2001). Measuring the emotional intelligence of medical school matriculants. *Academic Medicine*, 76, 507–508.
- Esmond-Kiger, C., Tucker, M., & Yost, C. (2006). Emotional intelligence: From the classroom to the workplace. *Management Accounting Quarterly*, 7, 35–41.
- Farmer, S. (2004). The relationship of emotional intelligence to burnout and job satisfaction among nurses in early nursing practice. *Dissertation Abstracts International*, 65, 3945B (UMI No. 3141849).
- Feather, R. (2009). Emotional intelligence in relation to nursing leadership: Does it matter? *Journal of Nursing Management*, 17, 376–382.
- Freshwater, D., & Stickley, T. (2004). The heart of the art: Emotional intelligence in nurse education. *Nursing Inquiry*, 11, 91–98.
- Gardner, H. (1983). *Frames of mind: The theory of multiple intelligences*. New York, NY: Basic Books.
- Gardner, L., & Stough, C. (2002). Examining the relationship between leadership and emotional intelligence in senior level managers. *Leadership & Organizational Development Journal*, 23, 68–78.
- Gillespie, M. (2002). Student-teacher connection in clinical nursing. *Journal of Advanced Nursing*, 37, 566–576.
- Goleman, D. (1995). *Emotional intelligence*. New York: Bantam.
- Herbert, R., & Edgar, L. (2004). Emotional intelligence: A primal dimension of nursing leadership. *Nursing Leadership*, 17, 56–63.
- Jenkins, B. (2006). Emotional intelligence of faculty members, the learning environment, and empowerment of baccalaureate nursing students. *Dissertations Abstracts International*, 67, 165B (UMI No. 3225156).
- Kerr, R., Garvin, J., Heaton, N., & Boyle, E. (2006). Emotional intelligence and leadership effectiveness. *Leadership & Organization Development Journal*, 27, 265–279.
- Knox, J., & Mogan, J. (1985). Important clinical teacher behaviors as perceived by university nursing faculty, students and graduates. *Journal of Advanced Nursing*, 10, 25–30.
- Kotzabassaki, S., Panou, M., Dimou, F., Karabagli, A., Koutsopoulou, B., & Ikonomou, U. (1997). Nursing students' and faculty's perceptions of the characteristics of 'best' and 'worst' clinical teachers: A replication study. *Journal of Advanced Nursing*, 26, 817–824.

- Krichbaum, K. (1994). Clinical teaching effectiveness described in relation to learning outcomes of baccalaureate nursing students. *Journal of Nursing Education*, 33, 306–316.
- Lee, W., Cholowski, K., & Williams, A. (2002). Nursing students' and clinical educators' perceptions of characteristics of effective clinical educators in an Australian university school of nursing. *Journal of Advanced Nursing*, 39, 412–420.
- Löfmark, A., & Thorell-Ekstrand, I. (2004). An assessment form for clinical nursing education. *Journal of Advanced Nursing*, 48, 291–298.
- Makarem, S., Dumit, N., Adra, M., & Kassak, K. (2001). Teaching effectiveness and learning outcomes of baccalaureate nursing students in a critical care practicum: A Lebanese experience. *Nursing Outlook*, 49, 43–49.
- Mayer, J. (1999). Emotional intelligence: popular or scientific psychology? *APA Monitor*, 30, 50.
- Mayer, J., & Salovey, P. (1997). What is emotional intelligence? In P. Salovey & D. Sluyter (Eds.), *Emotional development and emotional intelligence: Implications for educators*. (pp. 3–31). New York: Basic Books.
- Mayer, J., Salovey, P., & Caruso, D. (2000). *Selecting a measure of emotional intelligence: The case for ability scales*. In R. Bar-On & J. Parker (Eds.), *Handbook of Emotional Intelligence*. (pp. 320–342). San Francisco, CA: Jossey-Bass.
- Mogan, J., & Knox, J. (1983). Students' perceptions of clinical teaching. *Nursing Papers*, 15, 4–13.
- Mogan, J., & Knox, J. (1987). Characteristics of 'best' and 'worst' clinical teachers as perceived by university nursing faculty and students. *Journal of Advanced Nursing*, 12, 331–337.
- Molter, N. (2001). Emotion and emotional intelligence in nursing. *Dissertation Abstracts International*, 66, 2293A (UMI No. 3028771).
- Nehring, V. (1990). Nursing Clinical Teacher Effectiveness Inventory: A replication study of the characteristics of 'best' and 'worst' clinical teachers as perceived by nursing faculty and students. *Journal of Advanced Nursing*, 15, 934–940.
- Nelis, D., Quoidbach, J., Mikolajczak, M., & Hansenne, M. (2009). Increasing emotional intelligence: (How) is it possible? *Personality and Individual Differences*, 47, 36–41.
- Orme, G. (2001). *Emotional intelligent living*. Williston, VT: Crown House Publishing.
- O'Shea, H., & Parsons, M. (1979). Clinical instruction: Effective and ineffective teacher behaviors. *Nursing Outlook*, 27, 411–415.
- Pagano, M., & Gauvreau, K. (2000). *Principles of biostatistics*. (2nd ed.). Pacific Grove, CA: Duxbury Thomson Learning.
- Quoidbach, J., & Hansenne, M. (2009). The impact of trait emotional intelligence on nursing team performance and cohesiveness. *Journal of Professional Nursing*, 25, 23–29.
- Rochester, S., Kilstoff, K., & Scott, G. (2005). Learning from success: Improving undergraduate education through understanding the capabilities of successful nurse graduates. *Nurse Education Today*, 25, 181–188.
- Rosete, D., & Ciarrochi, J. (2005). Emotional intelligence and its relationship to workplace performance outcomes of leadership effectiveness. *Leadership & Organization Development Journal*, 26, 388–399.
- Sala, F. (2007). *Do programs designed to increase emotional intelligence at work-work? Issues and Recent Developments in Emotional Intelligence*. Retrieved December 28, 2007, from <http://www.eiconsortium.org>.
- Scanlan, J. (2001). Learning clinical teaching: Is it magic? *Nursing and Health Care Perspectives*, 22, 240–246.
- Sieh, S., & Bell, S. (1994). Perception of effective clinical teachers in associate degree programs. *The Journal of Nursing Education*, 33, 389–394.
- Stoltenberg, K. (1997). Faculty and student perceptions of effective nursing clinical teachers in associate degree nursing programs. *Masters Abstracts International*, 35 (UMI no. 1385928).
- Stone, H., Parker, J., & Wood, L. M. (2005). *Report on the Ontario Principals Council Leadership Study. Issues and Recent Developments in Emotional Intelligence, Consortium for Research on Emotional Intelligence in Organizations*. Retrieved August 15, 2006, from <http://www.eiconsortium.org>.
- Streiner, D. L., & Norman, G. R. (1998). *PDQ epidemiology*. (2nd ed.). Hamilton, ON: B.C. Decker.
- Thorndike, E. (1920). Intelligence and its uses. *Harper's Magazine*, 140, 227–235.
- Vitello-Ciccui, J. (2001). Leadership practices and emotional intelligence of nursing leaders. *Dissertation Abstracts International*, 62, 5039B AAT (UMI No. 3032096).
- Wilson, S., & Carryer, J. (2008). Emotional competence and nursing education: A New Zealand study. *Nursing Praxis in New Zealand*, 24, 36–47.
- Wiseman, R. (1994). Role model behaviors in the clinical setting. *Journal of Nursing Education*, 33, 405–410.
- Wolf, Z., Bender, P., Beitz, J., Wieland, D., & Vito, K. (2004). Strengths and weaknesses of faculty teaching performance reported by undergraduate and graduate nursing students: A descriptive study. *Journal of Professional Nursing*, 20, 118–128.
- Wong, S. (1978). Nurse-teacher behaviours in the clinical field: Apparent effect on nursing students' learning. *Journal of Advanced Nursing*, 3, 369–372.
- Young-Ritchie, C., Spence Laschinger, H., & Wong, C. (2009). The effects of emotionally intelligent leadership behaviours on emergency nurses' workplace empowerment. *Nursing Research*, 22, 70–85.